

7.

Plankton of the Bermuda Oceanographic Expeditions.
IV. Notes on Copepoda¹.

CHARLES BRANCH WILSON.

State Teachers College, Westfield, Massachusetts.

This is one of a number of papers dealing with the planktonic contents of a selected series of nets drawn at various levels off the coast of Bermuda on the Bermuda Oceanographic Expeditions of the New York Zoological Society under the direction of Dr. William Beebe. Full details of the nets, locality, etc., will be found in ZOOLOGICA, Volume XIII, Numbers 1, 2 and 3, and Volume XXI, Numbers 3 and 4.

The deep-water hauls provided large collections of copepods. From these, 11 vials of specimens selected by G. H. Wailes were examined by me and yielded 101 species; other identifications brought the number of species now recorded to a total of 112.

Of this number I have recorded 44 species (40%) from the Woods Hole Region (U. S. Nat. Mus., Bull. 158, 1932) and all have previously been recorded from the Atlantic or Mediterranean areas.

The genus *Copilia* was represented by one or two individuals in nearly every haul and specimens of the genus *Sapphirina* also occurred in several. The genus *Corycaeus* was represented more or less numerously in all hauls.

One individual each of *Gaetanus caudani* and of *Gaetanus latifrons* were obtained in Sample 9 (800 fathoms).

The surface hauls were characterized by the predominance of *Acartia clausi* and *Paracalanus parvus*; other species noted in them were *Corycaeus* spp., numerously, and *Oncaea* spp., sparsely, also *Mecynocera clausi*, *Clausocalanus arcuicornis*, *Euchaeta acuta*, *Candacia aethiopica*, *Candacia simplex*, *Pontellina plumata*, *Calanopia elliptica*, *Macrosetella gracilis*, *Miracia efferata*, *Oithona spinirostris*, *Lubbockia squillimana*, *Sapphirina angusta*, *Sapphirina auronitens*, *Sapphirina metallina* and a number of calanoids not specifically identified.

A single specimen of *Caligus curtus* was observed in Sample 18.

Order Copepoda.

Suborder Calanoida.

Family Calanidae.

Genus *Calanus* Leach 1819.

C. propinquus Brady.

Genus *Megacalanus* Wolfenden 1904.

M. longicornis Sars.

**M. princeps* (Brady) Sars.

M. sp. (immature).

¹ Contribution No. 498, Department of Tropical Research, New York Zoological Society.

- Genus *Neocalanus* Sars 1925.
 **N. gracilis* (Dana) Sars.
N. robustior (Giesbrecht) Sars.
- Genus *Undinula* A. Scott 1909.
U. darwini (Lubbock) Scott.
 **U. vulgaris* (Dana) Scott.
- Genus *Eucalanus* Dana 1852.
 **E. attenuatus* (Dana).
E. crassus Giesbrecht.
 **E. elongatus* (Dana).
E. mucronatus Giesbrecht.
E. pileatus Giesbrecht.
E. subtenuis Giesbrecht.
- Genus *Rhincalanus* Dana 1852.
 **R. cornutus* Dana.
 **R. nasutus* Giesbrecht.
- Genus *Mecynocera* I. C. Thompson 1888.
 **M. clausi* I. C. Thompson.
- Genus *Bathycalanus* G. O. Sars 1905.
B. richiardi G. O. Sars.
B. rigidus G. O. Sars.

Family Paracalanidae.

- Genus *Paracalanus* Boeck 1865.
 **P. parvus* (Claus) Sars.
- Genus *Calocalanus* Giesbrecht 1888.
 **C. pavo* (Dana) Giesbrecht.

Family Pseudocalanidae.

- Genus *Clausocalanus* Giesbrecht 1888.
 **C. arcuicornis* (Dana).
- Genus *Pseudocalanus* Boeck 1872.
 **P. minutus* (Krøyer).

Family Aetideidae.

- Genus *Aetideus* Brady 1883.
 **A. armatus* (Boeck).
- Genus *Chiridius* Giesbrecht 1892.
C. poppei Giesbrecht.
- Genus *Chirundina* Giesbrecht 1895.
 **C. streetsii* Giesbrecht.
- Genus *Gaetanus* Giesbrecht 1888.
G. armiger Giesbrecht.
G. caudani Canu.
G. latifrons G. O. Sars.
 **G. miles* Giesbrecht.
- Genus *Gaidius* Giesbrecht 1895.
 **G. brevispinus* (G. O. Sars).
 **G. tenuispinus* (G. O. Sars).
- Genus *Mesogaidius* Wolfenden.
M. intermedius Wolfenden.
- Genus *Euchirella* Giesbrecht 1888.
E. brevis (G. O. Sars).
- Genus *Undeuchaeta* Giesbrecht 1888.
 **U. major* Giesbrecht.
U. spectabilis (G. O. Sars).

- Genus *Pseudochirella* G. O. Sars 1920.
P. obesa G. O. Sars.
P. obtusa (G. O. Sars).
P. pustulifera (G. O. Sars).
 Genus *Pseudaetideus* Wolfenden 1904.
P. armatus (Boeck).

Family Euchaetidae.

- Genus *Euchaeta* Philippi 1843.
E. acuta Giesbrecht.
 **E. marina* (Prestandrea) Giesbrecht.
 Genus *Paraeuchaeta* A. Scott 1909.
P. bisinuata (G. O. Sars).
P. hanseni (With.).
 Genus *Pseudeuchaeta*.
P. norvegica (Boeck).

Family Phaennidae.

- Genus *Phaenna* Claus 1863.
P. spinifera Claus.

Family Scolecithricidae.

- Genus *Scottocalanus* G. O. Sars 1905.
S. securifrons (T. Scott).
 Genus *Scolecithrix* Brady 1883.
S. bradyi Giesbrecht.
 **S. danae* (Lubbock) Giesbrecht.
 Genus *Scolecithricella* G. O. Sars 1902.
S. abyssalis (Giesbrecht).

Family Centropagidae.

- Genus *Centropages* Krøyer 1849.
C. violaceus (Claus).

Family Metridiidae.

- Genus *Metridia* Boeck 1864.
 **M. brevicauda* Giesbrecht.
 **M. longa* (Lubbock).
 **M. lucens* Boeck.
M. normani Giesbrecht.
 **M. princeps* Giesbrecht.
M. venusta Giesbrecht.
 Genus *Pleuromamma* Giesbrecht 1898.
 **P. abdominalis* (Lubbock) Gies. & Schmeil.
 **P. gracilis* (Claus) Giesbrecht.
P. quadrungulata (F. Dahl).
 **P. robusta* (F. Dahl) Sars.
 **P. xiphias* (Giesbrecht).

Family Lucicutiidae.

- Genus *Lucicutia* Giesbrecht 1898.
L. clausi (Giesbrecht).
L. flavicornis (Claus).
L. longicornis Giesbrecht.
 **L. magna* Wolfenden.
L. maxima Steuer.

Family Heterorhabdidae.

Genus *Heterorhabdus* Giesbrecht 1898.*H. grimaldi* (Richard).**H. longicornis* (Giesbrecht).*H. papillager* (Claus).*H. spinifrons* (Claus).Genus *Haloptilus* Giesbrecht 1898.*H. ornatus* (Giesbrecht).*H. longicornis* (Claus).Genus *Euaugaptilus* G. O. Sars 1920.*E. elongatus* (G. O. Sars).

Family Candaciidae.

Genus *Candacia* Dana 1846.*C. simplex* (Giesbrecht).*C. aethiopica* (Dana).

Family Pontellidae.

Genus *Pontellina* Dana 1853.**P. plumata* (Dana).Genus *Calanopia* Dana 1852.*C. elliptica* (Dana).

Family Acartiidae.

Genus *Acartia* Dana 1846.**A. clausi* Giesbrecht.**A. danae* Giesbrecht.

Suborder Harpacticoida.

Family Ectinosomidae.

Genus *Microsetella* Brady & Robertson 1873.**M. norvegica* (Boeck).

Family Macrosetellidae.

Genus *Macrosetella* A. Scott 1909.*M. gracilis* (Dana).Genus *Miracia* Dana 1846.**M. efferata* Dana.

Family Tachidiidae.

Genus *Clytemnestra* Dana 1847.*C. scutellata* Dana.

Suborder Cyclopoida.

Family Oithonidae.

Genus *Oithona* Baird 1843.*O. attenuata* Farran.**O. similis* Claus.**O. spinirostris* Claus.

Family Oncaeiidae.

Genus *Oncaea* Philippi 1843.*O. conifera* Giesbrecht.*O. curta* G. O. Sars.*O. media* Giesbrecht.*O. mediterranea* Claus.

**O. minuta* Giesbrecht.

O. tenella G. O. Sars.

**O. venusta* Philippi.

Genus *Conaea* Giesbrecht 1891.

C. rapax Giesbrecht.

Genus *Lubbockia* Claus 1863.

L. aculeata Giesbrecht.

L. squillimana Claus.

Family Corycaeidae.

Genus *Corycaeus* Dana 1845.

C. agilis Dana.

C. carinatus Giesbrecht.

C. catus M. Dahl.

C. crassiusculus Dana.

**C. elongatus* Claus.

C. lautus Dana.

C. limbatus Brady.

**C. speciosus* Dana.

C. typicus Krøyer.

Genus *Farranula* Blake 1932.

F. carinata (Giesbrecht).

Genus *Sapphirina* J. V. Thompson 1829.

**S. angusta* Dana.

**S. auronitens* Claus.

S. metallina Dana.

Genus *Copilia* Dana 1849.

C. quadrata Dana.

C. vitrea Haeckel.

Suborder Caligoida.

Family Caligidae.

Genus *Caligus* Müller 1785.

**C. curtus* Müller.

Note: The species marked "*" have been recorded from the Woods Hole region by Wilson.